

**REMARKS**

Claims 1-13 stand rejected under 35 U.S.C. § 102 as being anticipated by Keller. This rejection is respectfully traversed for the following reasons. Claims 1, 5, 11 and 13 are independent. As a preliminary matter, it is noted that claims 14 and 15 are not included in the statement of rejection set forth in the outstanding Office Action.

In order to expedite prosecution, a personal interview with Examiner Tran and Supervisor Bella was conducted on September 4, 2003. Applicant and Applicant's representative would like to thank Examiner Tran and Supervisor Bella for their courtesy in conducting the interview and for their assistance in resolving issues. A summary of the interview follows.

Claim 1 recites in pertinent part, an "apparatus for drawing a line connecting a start point to an end point ... comprising: midpoint coordinate generating means . . ." It is respectfully submitted that the line drawing apparatus of Keller does not generate midpoints as set forth in claim 1. In contrast, the apparatus of Keller is directed merely to dividing the line to be drawn into equal length segments, and does so by determining starting points for line-generating pointers P which are used to plot and represent the segments. However, as shown in each disclosed embodiment of Keller (see Figures), none of the starting points define a midpoint in the manner recited in claim 1. Indeed, the starting points for the pointers are determined based on how best to fit the actual line (see Figure 4), and is completely independent of a midpoint determination relative to the various starting points.

Regarding Figure 8, it is respectfully submitted that point 84 is NOT a generated point used to draw the line. Rather, only points 86 and 88 are part of line drawing process so as to create the starting points for line generating pointers P1, P2 and P3, P4, respectively. Point 84 is only illustrated as representative of the inherent center of the line. This is further evidenced by the fact that points 86 and 88 are both physically shown as dots on the line, whereas point 84 is NOT physically shown but merely serves as a ***visual indication of where the line generating pointers P2 and P3 overlap*** (represented by the facing arrow heads).

In order to further clarify the distinction between the present invention and Keller, claim 1 has been amended to recite "wherein data ***output from*** said midpoint coordinate generating means is ***input to*** said midpoint coordinate generating means" (emphasis added). One exemplary embodiment of such a construction, which can assist midpoint coordinate generation, is shown in Figure 2 of Applicant's specification. In particular, data output from shifter 22 is fed-back into storage 12 so as allow processing that can determine the subsequent midpoint. Similarly, data output from storage 11 and/or 12 is fed-back to storage 11.

Keller, on the other hand, is completely silent as to any data feed back mechanism. Keller discloses only a forward moving data path whereby starting points for line generators are created and corresponding line segments formed. The particular data processing path is not of significance in Keller. Indeed, Keller discloses only a generic block diagram in Figure 1 for the data processing path, and is silent as to inputting data back to the means which output said data for use in subsequent processing.

Turning to claims 5, 11 and 13, each define some manner by which data is fed-back. For example, claim 5 recites in pertinent part, "wherein the coordinate data **output from the first** and second data storage means are **input to the first** data storage means, and wherein **the divided data** is input from the divide-by-two means **to the second storage means ...**" (emphasis added). Claim 11 recites in pertinent part "wherein the **divided data** is stored... on a predetermined one of **the data storage areas**" (emphasis added). Claim 13 recites in pertinent part "storing the start point coordinate data **back to** the first storage means ... storing the end point coordinate data on **the first storage means** ... storing the output data of the divide-by-two means on **the second data storage means** ..." (emphasis added)).

As discussed above, Keller is completely silent as to the mechanism by which the data is processed. Turning to the outstanding Office Action, the Examiner relies on buffer 18 and memory 12 as the claimed storage means. However, memory 18 is merely the display buffer and has no operational functionality with respect to generating data points for the pointers. Further, memories 18 and 12 have no feed-back relation with each other, let alone in the manner recited in the pending claims (e.g., claim 13 recites "outputting ... data from the **second** data storage means ... and storing the ... data on the **first** storage means" (emphasis added)).

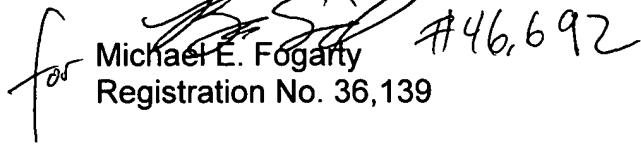
In addition, the Examiner alleges that the dx/2, dy/2 reads on the divide-by-two means. However, Keller discloses only that dx/2, dy/2 represents the center of the line but does not suggest that the center point is fed-back to create additional mid-points. As mentioned above, the starting points are determined independent of midpoint analysis.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently, in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that Keller does not anticipate claims 1, 5, 11 and 13, nor any claim dependent thereon. Based on all the foregoing, it is submitted that claims 1-15 are patentable over Keller. Accordingly, it is respectfully requested that the rejection of claims 1-15 under 35 U.S.C. § 102 over Keller be withdrawn.

**CONCLUSION**

Having fully and completely responded to the Office Action, Applicant submits that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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